KLIMENTOV, A.N.

Klimentov, A. N. [illegible]
flow [illegible]
All members in the equation are expressed [illegible]
imaginary homogeneous liquid having specific weight [illegible]
discharge. Correction factors are [illegible]
[illegible] corresponding formulae [illegible]

Klimentov, A.N.

BOGDANOV, V.Ya., inzhener; KLIMENTOV, A.N., inzhener; CHEBOTAREV, F.N., inzhener.

Improve the equipment and technology for hydraulic mining. Mekh. trud.rab 9 no.10:27-29 O '55. (MLRA 9:1)
(Hydraulic mining)

KLIMENTOV, A.N.

AID P - 2588

Subject : USSR/Engineering

Card 1/1 Pub. 35 - 11/20

Author : Klimentov, A. N., Kand. Tech. Sci.

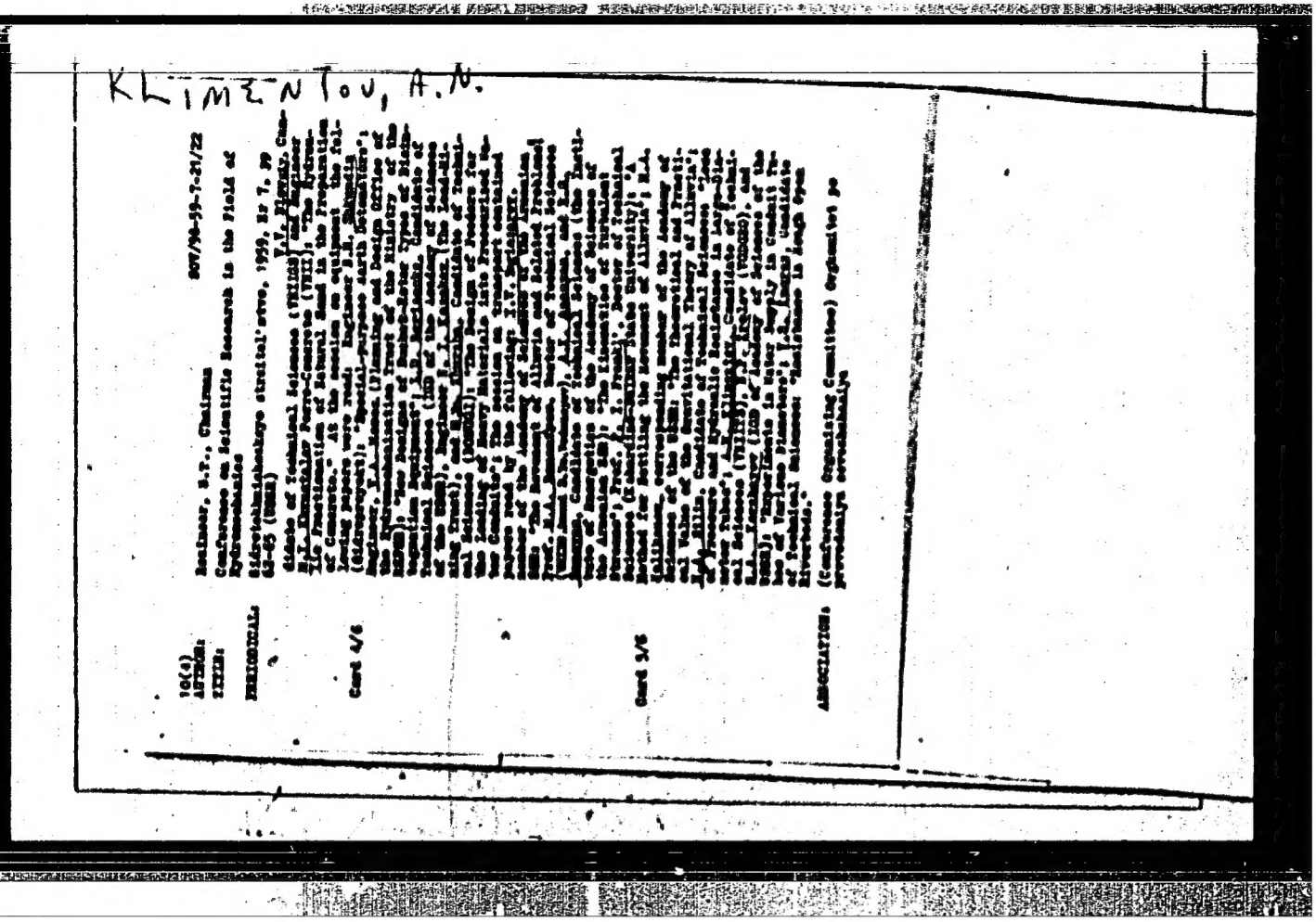
Title : Flow of earth materials, their hydraulic radius and Reynolds number

Periodical : Gidr stroi, 24 4, 33-35, Ap 1955

Abstract : A mathematical analysis on the mixture of water and earth material flowing in a channel is given. One Russian reference, 1951.

Institution : None

Submitted : No date



KLIMENTOV, A.N.

LIMENTOV, B. V.

Mnogootraslevoi Kubanskii kolkhoz [Diversified Kuban collective farm]. Moskva, Gos. izd-vo sel'khoz. lit-ry, [1953]. 160 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 12 March 1954.

KLIMENTOV, B.V.

[Field practices on collective and state farms] Polevye opyty v kolkhozakh i sovkhozakh. Izd.2., ispr. i dop. Moskva, Gos. izd-vo sel'khoz.lit-ry, 1959. 180 p. (MIRA 13:8)
(Field crops)

KLIMENTOV, O.

KLIMENTOV, O. Forecasting the inflow of water into a mine. Tr. from the Russian. p. 362. Vol. 4, no. 12, Dec. 1956. RUDY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

KUZNETSOVA, E. D.; KLIMENTOV, L. N. Engs.

Electric Welding

Welding on insulator hooks. Elek. sta. 23, no. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.

KLIMENTOV, L.V.

Landform dynamics of the lower Dniester floodland. Izv. Vses. geog. ob-va 95 no.6:533-536 N-D '63. (MIRA 17:1)

KLIMENTOV, L.V.

Floating masses of reeds and cattails on the Lower Dniester and the Dnieper, their origin, and some characteristics. Bot.zhur.[Ukr.] 10 no.3:34-41 '53. (MLRA 6:8)

1. Odes'kyy universytet im. I.I.Mechnikova.
(Dniester river--Fresh-water flora) (Fresh-water flora--Dniester river)

KLIMENTOV, L.V.

Bushes of the lower reaches of the Dnieper and Dniester Rivers, their origin and some characteristics. Izv.Vses.geog.ob-va 86 no.1:80-85 Ja-F '54. (MLRA 7:2)
(Dnieper River--Fresh-water flora) (Fresh-water flora--Dnieper River) (Dniester River--Fresh-water flora) (Fresh-water flora--Dniester River)

KLIMENTOV, L.V.

Biology of the reed (Phragmites communis Trin.) and its relation to certain specific features of flood-plain marshes. Nauch. dokl. vys. shkoly; biol. nauki no.1:113-116 '60. (MIRA 13:2)

1.Rekomendovana kafedroy sistematiki rasteniy Odesskogo gosudarstvennogo universiteta im. I.I. Mechnikova.
(Reed (Botany))

KLIMENTOV, L.V.

On the vegetation and land form of the lower Dniester floodplain and changes that have occurred in them. Izv.Vses.geog. ob-va 92 no.3:235-250 My-Je '60. (MIRA 13:6)
(Dniester Valley--Physical geography)

KLIMENTOV, L. V.(Odessa)

Spreading of reeds by runners. Bot. zhur. 48 no.3:450-452 Mr '63. (MIRA 16:4)

(Odessa region—Reed(Botany))

KLIMENTOV, L. V.

What are the flood lands? Izv Vses geog ob-va 96 no. 1: 64-67 Ja-F '64. (MIRA 17:5)

KLIMETOV, L.V.

Definition of the concept "plavni." Bot. zhur. 49 no.1:127-130 Ja '64. (MIRA 17:2)

1. Odesskiy gosudarstvennyy universitet.

KLIMENTOV, L.V.

Change in the landform and vegetation in the estuary section of the floodland of the lower Dniester and its floodlands. Trudy Od. un. 152. Ser. geol. i geog. nauk no.9:93-106 '62.
(MIRA 17:6)

5(1),25(5)

AUTHORS: Klimentov, M. G., Kopovoy, P. M. SOV/64-58-7-14/18

TITLE: Calcination of Bicarbonate With Indirect Steam (Kal'tsinatsiya bikarbonata glukhim parom)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 7, pp 440-441 (USSR)

ABSTRACT: The soda production according to the ammonia method is carried out in some enterprises, among them at the Sterlitamakskiy sodovyy zavod (Sterlitamak Soda Works), on obsolete plants. Drying drums are used which need larger amounts of expensive fuels and have other disadvantages in addition to this. In the above-mentioned branch experiments with drying plants of the dry-box type with indirect steam heating were carried out. The plant is a vertical drum with four heating levels which have a distance of 400 mm from each other. The heating surface was produced by casting a steel tube coil with cast iron and processing the surface on a lathe. Each level has a steam and condensation water tube. The bicarbonate is filled in through the upper opening and the soda through the lower bunker. The mixing is carried out by means of scrapers which secure the same height of the charge at all levels. Steam of 11 atmospheres absolute pressure was used. In the experiments a

Card 1/2

Calcination of Bicarbonate With Indirect Steam SOV/64-58-7-14/18

capacity of 320 kg soda/24 hours per 1 m^2 heating surface was attained. It was found that the efficiency of the level driers is higher than that of the drying drums. The power consumption is much lower with the former, and there exists a better possibility of controlling temperature, and the plant can be adjusted to operation in vacuum. With a lower volume required smaller heating surfaces are present and the bicarbonate does not bake together due to the indirect steam heating and does not stick to the levels and scrapers. There are 2 tables.

Card 2/2

KLIMENTOV, P. P. (Asst)

"Investigation of Certain Radio Engineering Circuits with Negative Parameters." Cand Tech Sci, Moscow Electrical Engineering Inst of Communications. 11 Mar 54. Dissertation (Vechernyaya Moskva Moscow, 26 Feb 54)

SO: SUM 186, 19 Aug 1954

KLIMENTOV, P. P.

KAMENSKIY, Grigoriy Nikolayevich, 1894- ; KLIMENTOV, P.P., ; OVCHINNIKOV, A.M.

[Hydrogeology of mineral deposits] Gidrogeologiia mestorozhdenii poleznykh iskopaemykh. Pod red. G.N.Kamenskogo. Moskva, Ges. izd-vo geol. lit-ry, 1953. 354 p. (MLRA 7:6)

(Geology, Economic)
(Mines and mineral resources)

KLIMENTOV, P. P.

"The Hydrogeology of Mineral Formations," by G. N. Kamensky, P. P. Klimentov and A. M. Ovtchinnikov, and authorized by the General Administration for Higher Education of the Ministry of Culture of USSR to be used as a textbook in Geological Institutes. Published by the State Publishing House for Literature on Geology, Moscow, 1953.

The book gives a survey of Mining Hydrogeology from the theoretical, methodical and practical points of view. It gives information on the presence of water in different geological structures, the chemical composition of ground waters, observations on infiltration and its effect on rock. It explains the best measures to use for fighting infiltration and methods of hydrogeological analysis and hydrogeological service.

SO: 38305

KLIMENTOV, P. P.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kniga, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Kamenskiy, G. N. Klimentov, P. P. Ovchinnikov, A. M.	"Hydrogeology of Deposits of Useful Minerals"	Moscow Geological Prospecting Institute imeni S. Ordzhonikidze

SO: W-30604, 7 July 1954

KLIBETOV, P. P.

5409. Gidrogeologiya. Kratkiy kurs obshchey i rudnichnoy gidrogeologii. (Uchebnik dlya geol.-razved. tekhnikumov). M., Geogeoltekhizdat, 1954. 312 s. s ill. i kart.; 2 l. skhem. i kart. 22 sm. 15,000 eks. 7r.95k. V per. —Bk tit. l. oshibochno: Kratkiy kurs obshchey i rudnichnoy geologii.—Bibliogr: s. 303—306 —(55-1043) 551.4944 (016.3)

SO: Knizhnaya Letopis', Vol. 1, 1955

KLIMENTOV, Petr Platonovich

Academic degree of Doctor of Geological-Mineralogical Sciences, based on his defense, 29 December 1954, in the Council of the Moscow Geological-Res Inst imeni Ordzhonokidze, of his dissertation entitled: "Hydrogeological basis of prognosis of water inflow into mine openings and measures for draining."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no.9, 16 April 55, Byulleten' MVO SSSR, No. 14, Jul 56, Moscow, pp 4-22, Uncl. JPRS/MY-429

KLIMENTOV, P.P.

New theory for determining water influx in mines. Razved. i okh.nedr 20 no.5:41-47 '54. (MLRA 10:1)
(Water, Underground) (Mine drainage)

W-31429, 2 Sep 55

KLIMENTOV, P.P., OVCHINNIKOV, A.M., redaktor; ZMTIN, M.L., redaktor; KISELEVA, A.A., tekhnicheskiy redaktor

[Hydrogeology; brief course of general and mine hydrogeology] Gidrogeologiia; kratkii kurs obshchei i rudnichnoi gidrogeologii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1955. 311 p. [Microfilm] (MLRA 8:3)
(Water, Underground) (Mine water)

2379. Klimentov, P. P., Determination of the coefficient of filtration for a given evacuation from a solid aperture to the extent of one degree of determination of the level [illegible]

Abrams [illegible] no. 1, 45-48 [illegible]

Rev. 8403

A graphical solution of the Dupuit equation is put forward for the yield of the ideal well [illegible] with the [illegible] equation of [illegible] P. Kusakin for the radius of influence of each well when [illegible] is steady. In the results [illegible] author [illegible] the [illegible] of pumping out, the coefficient of [illegible] influence. Kusakin in 19[illegible] It has to be pointed out that [illegible] conditioned by steady [illegible] influence [illegible] of contour of [illegible] discharge of the water bearing layer is introduced.

[illegible]

Translation [illegible]

3

SYROVATKO,M.V.

Review of the book"Hydrogeology of mineral deposits" written by G.N.Kamenskii, P.P.Klimentov, A.M.Ovchinnikov. Reviewed by M.V. Syrovatko. Sov.geol. no.47:100-105 '55. (MLRA 8:11)
(Mines and mineral resources) (Kamenskii, Grigorii Nikolaevich, 1894-) (Klimentov,P.P.) (Ovchinnikov,A.M.)

KLIMENTOV, P.P.

Analysis of the effect of deposit relief on the quantity of water inflow into mine workings. Razved.i okh.nedr 22 no.1:45-48 Ja '56. (MLRA 9:5)

(Water, Underground) (Mine drainage)

KLIMENTOV, P.P.

Basic requirements for sinking and constructing hydrogeological wells. Izv. vys. ucheb. zav.; geol. i razv. 1 no.12:123-130 D '58. (MIRA 12:12)

1. Moskovskiy geologorazvedochnyy institut im. S. Ordzhonikidze.
(Water, Underground)

SOV/132-59-6-8/16

3(2)

AUTHOR: Klimentov, P.P.

TITLE: On the Problem of Hydrogeological Sampling of Bore-Holes Used for Mapping

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 6, pp 47 - 51 (USSR)

ABSTRACT: The author describes the utilization of bore-holes, drilled for structural mapping purposes, as hydrogeologic observation points and different types of samplers to be used in these bore-holes. Usually, the bore-hole must have been thoroughly cleaned and the drilling fluid pumped out before samples of ground water could be taken for analysis. The samplers proposed by the author very much simplify this operation. The construction of these samplers is very simple (Figures 1 and 2). They consist of a long metallic tube with rubber compartments, and a sample-taking compartment either at the end of the tube or in the

Card 1/2

To the Problem of Hydrogeological Sampling of Bore-Holes Used for Mapping

middle between two rubber chambers. When the air is pumped into this tube the rubber parts inflate and isolate the part of bore-hole from which water for analysis is to be taken. The action of these samplers is described in detail. There are 3 diagrams.

ASSOCIATION: MGRI

KLIMENTOV, P.P.

Special methods for shaft sinking in quicksand. Izv. vys. ucheb. zav.; geol. i razv. 2 no.6:117-125 Ja '59 (MIRA 13:3)

1. Moskovskiy geologorazvedochnyy institut im. S. Ordzhonikidze.
(Shaft sinking)

KLIMENTOV, P.P.

Graphic method for the determination of the reduced power of underground streams. Izv. vys. ucheb. zav.; geol. i razved. 3 no.9:87-97 S '60. (MIRA 13:12)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.
(Water, Underground--Graphic methods)

KLIMENTOV, Petr Platonovich; LANGE, O.K., zasluzhennyy deyatel' nauki, prof., retsenzent; CHAPOVSKIY, Ye.G., nauchnyy red.; SKVORTSOV, V.P., red. izd-va; IVANOVA, A.G., tekhn. red.

[Methodology of hydrogeological investigations] Metodika gidrogeologicheskikh issledovanii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1961. 389 p. (MIRA 14:6)
(Water, Underground)

KLIMENTOV, P.P.

Role of hydrogeology in the development of the national economy of the Chinese People's Republic. Trudy MGRI 38:114-120 '60. (MIRA 14:5)
(China--Water, Underground)

KLIMENTOV, Petr Platonovich; PYKHACHEV, Georgiy Borisovich; TOLSTIKHIN, N.I., prof., retsenzent; SHAGOYANTS, S.A., prof., retsenzent; DAVIDOVICH, V.I., dots., retsenzent; ASATUR, K.G., dots., retsenzent; NOVOZHILOV, V.N., dots., retsenzent; PAUKER, N.G., starshiy nauch. sotr., retsenzent; KRASIL'NIKOVA, N.P., ass., retsenzent; ABRAMOVA, S.K., otv. red.; SLAVOROSOV, A.Kh., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Dynamics of underground water] Dinamika podzemnykh vod. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 514 p. (MIRA 14:12)

(Water, Underground)

KLIMENTOV, P.P.

Hydrogeological investigation in boring for thermal waters.
Izv.vys.uchseb.zav.;geol.i razv. 4 no.9:94-107 S '61. (MIRA 14:9)

1. Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze.
(Geology)

KLIMENTOV, Petr Platonovich, prof.; FEDOSEYEV, I.A., red.; KAPYSHEVA, V.S., red.izd-va; GOROKHOVA, S.S., tekhn. red.

[General hydrogeology]Obshchaia gidrogeologiia. Izd.2., perer. Moskva, Vysshaia shkola, 1962. 210 p. (MIRA 16:2)
(Water, Underground)

SEDENKO, Matvey Vasil'yevich; TOLSTIKHIN, N.I., retsenzent; KLIMENTOV, P.P., retsenzent; ZHELTOV, P.I., retsenzent[deceased]; CHAPOVSKIY, Ye.O., red.; FEDOTOVA, A.I., red.izd-va; GUROVA, O.A., tekhn. red.

[Hydrogeology and engineering geology] Gidrogeologiia i inzhenernaia geologiia. Moskva, Gosgeoltekhizdat, 1962. 356 p. (MIRA 16:2)

(Water, Underground) (Engineering geology)

KLIMENTOV, P.P.

Effect of underground waters on the process of underground gasification of coal deposits. Izv. vys. ucheb. zav.; geol. i razv. 6 no.4:106-119 Ap '63. (MIRA 16:6)

1. Moskovskiy geologorazvedochnyy institut im. S. Ordzhonikidze.
(Coal gasification, Underground)
(Water, Underground)

KLIMENTOV, P.P.

Hydrogeological studies for purposes of underground gasification of coal deposits. Izv. vys. ucheb. zav.; geol. i razv. 6 no.9:104-119 S '63. (MIRA 17:10)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.

KLIMENTOV, P.P.

Hydraulic fracture for the underground gasification of coal deposits. Izv. vys. ucheb. zav.; geol i razv. 7 no.10:97-105 O '64. (MIRA 18:7)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.

KLIMENTOV, V.

A case of injury of the subclavian artery in thoracoplasty. Suvrem. med., Sofia 8 no.9:100-102 1957.

1. Iz sanatoriuma na SORS - Iskrets Gl. lekar: S. Simeonov.
(COLLAPSE THERAPY, compl.
perop. inj. of subclavian artery in thoracoplasty)
(ARTERIES, SUBCLAVIAN, wounds and inj.
perop. in thoracoplasty)

KLIMENTOV, V.; CHERNEV, B.

Epidemiology of osteoarticular tuberculosis in Bulgaria during the period of 1952-1960. Khirurgiia 15 no.2/3:193-195 '62.

(TUBERCULOSIS OSTEOARTICULAR epidemiol)

KLIMENTOV, V. B.

AUTHORS: Klimentov, V. B., Gryazev, V. M. 89-12-4/29

TITLE: Measurement of Neutron Resonance Absorption Integrals (Izmereniye rezonansnykh integralov pogloshcheniya neytronov)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 12, pp. 507-514 (USSR)

ABSTRACT: The measurements were carried out in a swimming-pool reactor. Its critical radius was 55 cm and its height was 60 cm. The active zone contained 10 kg U^{235} and the relation H/U^{235} amounted to 330. Natural uranium and ordinary water were used as heterogeneous reflector. In the center of the active zone a thermal flow of neutrons of less than 10^8 n/cm^2.sec was measured. The resonance integrals were measured by the aid of the statistical method of the reactivity modification of the reactor and they provided the following results:

Element	Resonance absorption Integral in barn	Element	Resonance Absorption Integral in barn	Element	Resonance Absorption Integral in barn
B	280±40	Cd	11,7±2,7	Cs	169±23
N	4,8±2,4	Ge	3,5±2,9	Ba	12,6±1,7
P	2,3±0,5	Se	9,6±1,2 5	Sm	1790±270

Card 1/2

Measurement of Neutron Resonance Absorption Integrals. 89-12-4/29

Cl	12,8±1,7	Br	118±14	Cd	67±8
K	3,5±1,7	Rb	9,0±2,8	Hf	1470±200
Ti	3,8±0,9	Sr	10,0±2,6	Ta	474±62
V	3,3±0,8	Zr	3,7±0,5	W	290±35
Cr	2,6±1,1	Mo	13,8±1,7	Os	180±20
Mn	11,7±1,5	Ag	466±70	Ir	2000±490
Fe	2,3±0,4	In	2220±300	Hg	72,4±8,0
Co	38,3±4,0	Sn	5,7±0,7	Th	61,8±12,0
Ni	3,2±0,5	Sb	106±13	U	224±40
Cu	3,7±0,8	Te	106±13		
Zn	3,4±0,8	I	106±12		

There are 2 tables, 6 figures and 9 references, 3 of which are Slavic.

SUBMITTED: May 10, 1957

AVAILABLE: Library of Congress

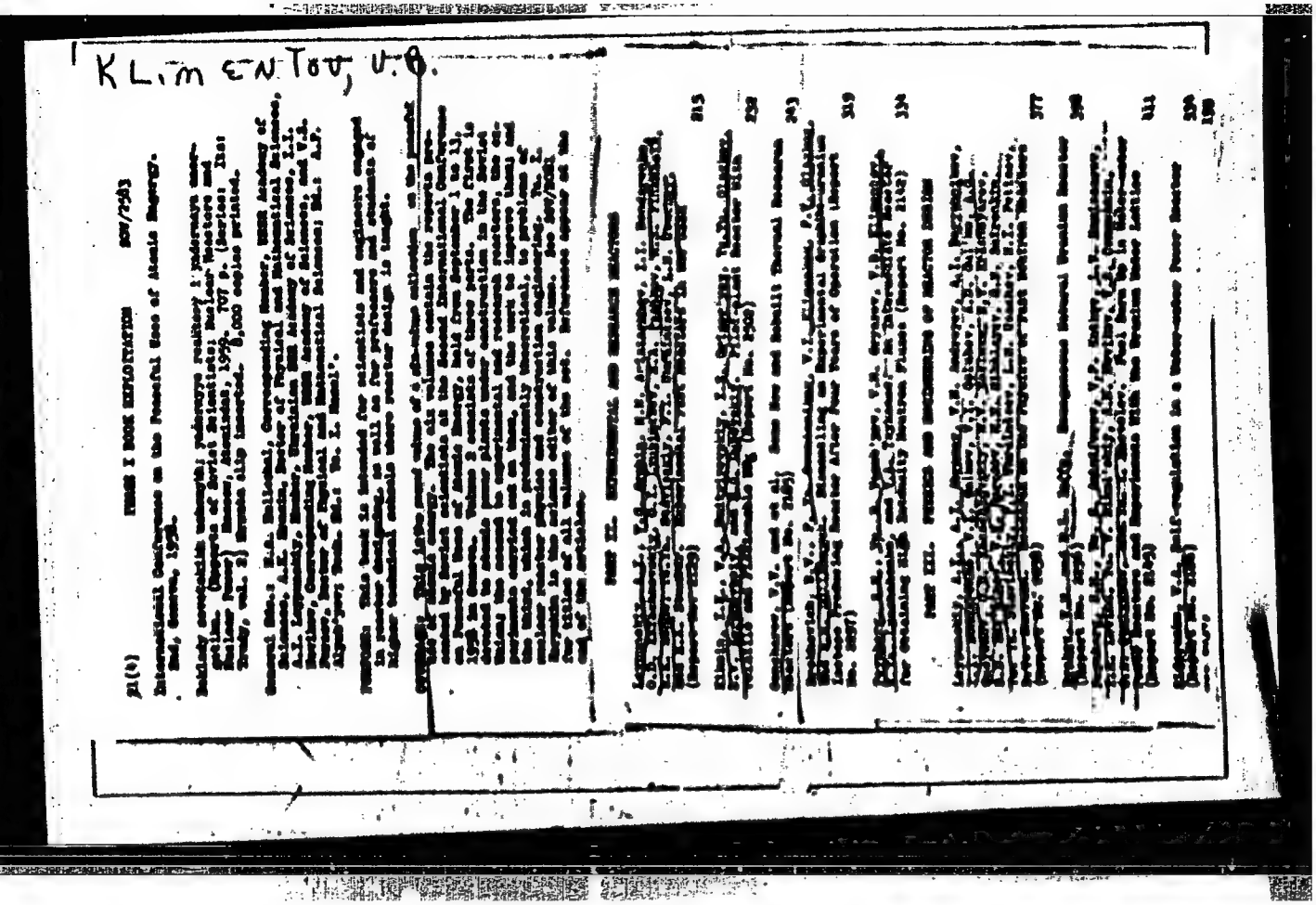
Card 2/2

KLIMENTOV V. B.

FEYNBERG, S. M., VOROBYEV, E. D., GRYAZEV, V. M., KLIMENTOV, V. B., LYASHCHENKO, N. Ya., TSIKANOV, V. A.

"Uranium-Water Intermediate Reactor Used for Obtaining High-Intensity Neutron Fluxes."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.



KLIMENTOV, V. B.

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AUTHORS: Pasichnyk, M.V., Barchuk, I.F., and Klymentov, V.B.

TITLE: Experimental study of the physical parameters of the VVR-M reactor of the Institute of Physics of the Academy of Sciences UkrSSR

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 1, 1962, 3-13

TEXT: The VVR-M reactor, built at the Institute of Physics of the AS UkrRSR, is an improved version of the light-water moderated reactor VVR-S. The design and characteristics of the reactor are described in V.V. Goncharov et al. (Ref. 1: "Trudy" of the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva 1958 Doklady sovetskikh uchenykh, v. 2, Atomizdat, M., 1959). The improvement resulted in a fivefold increase in the power level of the reactor and in a tenfold increase in the density of the neutron flux in the active section. The results are given of experiments conducted during the operation of the reactor at almost-zero power. The critical experiment was completed when a power of 5000 kw was rea-

Card 1/3

Experimental study of the physical ...

ched. Two types of active section were studied: 1) With central configuration, and 2) A shifted section. The loading of the section and the disposition of all the elements of the reactor are shown in two figures. The attainment of critical size was controlled by means of three starting devices. The pre-critical experiments were conducted in the presence of a radium-beryllium neutron source. Graphs are shown of the multiplication, upon reaching the critical state; according to these graphs, the critical mass of the reactor with beryllium neutron moderator equals 50.5 fuel units (1.39 kg/ U^{235}). The efficiency of manual rod-control (with respect to the shell-and-tube heat exchangers (THE)) was estimated. The relative distribution of the thermal-neutron flux was determined by the method of activated copper indicator wires (0.7 to 1.0 mm in diameter). The distribution curves show a maximum of thermal-neutron flux at a distance of 4 - 5 cm from the outer THE-elements. The mean value of the neutron flux for a distribution down the central THE-elements, is $\bar{N}_z = 0.48$, whereas the maximum value $N_{rel} = 0.6$. The distribution curves are almost symmetrical, with the exception of one curve, whose nonsymmetri-

Card 2/3

cal shape is due to the influence of the boron automatic-control rods. Calibration of control rods: The following control-rods were calibrated: 1) The automatic control rod, 2) the first- and the second manual control-rods, and 3) the precision control-rod. The manual control-rods contain boron carbide. The automatic control-rod is of steel or boron carbide. Calculations showed that upon reaching a power of 5000 kw, the reactor contained a maximum flux of thermal neutrons -- $0.5 \cdot 10^{14}$ neutr./cm^{2}sec. With an active section of 5.5 $\cdot 10$ cm^3, the mean flux of thermal neutrons was $0.37 \cdot 10^{14}$ neutr./cm^{2}sec. The authors express their thanks to the personnel of the reactor of the Institute of Physics of the AS UkrSSR, who started the reactor, and of the Institute of Atomic Energy of the AS USSR im. I.V. Kurchatov. There are 12 figures, 2 tables and 2 Soviet-bloc references.

ASSOCIATION: Instytut fizyky AN URSR (Institute of Physics of the AS UkrRSR), Kyyiv

SUBMITTED: March 6, 1961

Card 3/3

PASECHNIK, M.V. [Pasichnyk, M.V.]; BARCHUK, I.F.; KLIMENTOV, V.B. [Klymentov, V.B.]

Experimental investigation of the physical parameters of the VVR-M [water moderated-water cooled] reactor of the Institute of Physics of the Academy of Sciences of the Ukrainian S.S.R. Ukr.fiz.zhur. 7 no.1:3-14 Ja '62. (MIRA 15:11)

1. Institut fiziki AN UkrSSR, Kiyev.
(Kiyev—Nuclear reactions)

L 11219-66 EWT(d)/EWT(m)/EWP(v)/EWP(k)/EWP(h)/EWP(l) DIAAP
ACC NR: AP6005535 SOURCE CODE: UR/0089/66/020/001/0063/0065

AUTHOR: Klimentov, V. B.; Nechiporuk, V. A.; Konchinskiy, G. A.; Yaroshevich, V. F.; Strutinskiy, V. A.; Popov, V. D.; Nikonov, A. V.

ORG: none

TITLE: Test stand at the Institute of Physics AN UkrSSR

SOURCE: Atomnaya energiya, v. 20, no. 1, 1966, 63-65

TOPIC TAGS: nuclear engineering, nuclear reactor, reactor fuel element, test stand

ABSTRACT: A test stand for critical assemblies was put into operation at the Institute of Physics AN UkrSSR at the end of 1964. The installation uses assemblies of fuel elements of the VVR-M research reactor; the moderator is ordinary water; the side reflector is made from the beryllium reflectors of the VVR-M reactor. The stand is located in a separate building. The radioactive zone is separated from the control panel by one meter of concrete shielding. The installation is equipped with sensitive monitoring and measuring systems as well as with systems for automatic and remote control. All precautions have been taken to assure reliable nuclear

UDC: 621.039.572

Card 1/3

safety and automatic control of the critical assemblies. A dc amplifier is connected to a galvanometer for monitoring currents in the ionization chamber down to 10^{-12} amp. Two recording potentiometers and a pulse rate counter are used for monitoring the power level. The instruments give reliable readings below the subcritical power level. Automatic control of the process is possible during operation at a power of more than 0.03 w which corresponds to an average thermal neutron flux of about $0.4 \cdot 10^5$ neutrons/cm^2·sec. The automatic regulator consists of two KNK-56 ionization chambers connected in parallel, a potentiometric power controller with a high impedance input and a steel absorber, an electronic amplifier and an amplidyne. This automatic regulator is extremely convenient for operation with critical assemblies. It may be used for rapid compensation of a chain reaction at "zero" power levels and for calibration of control rods. The unit increases work safety and accuracy of holding a constant power level when detectors are activated. In addition to the steel absorber in the automatic regulator, chain reaction may be controlled by two or three boron remote control rods. An emergency signal automatically brings these rods together with three emergency safety rods into the radioactive zone of the assembly. All control and safety rods are moved by servo drives which are connected to selsyns and position indicators. Operational experience at

L 14219-66
ACC NR: AP6005575

the Institute of Physics has shown that the test stand is a versatile tool which may be conveniently used for experimental research in physics and nuclear engineering. Orig. art. has: 4 figures. [14]

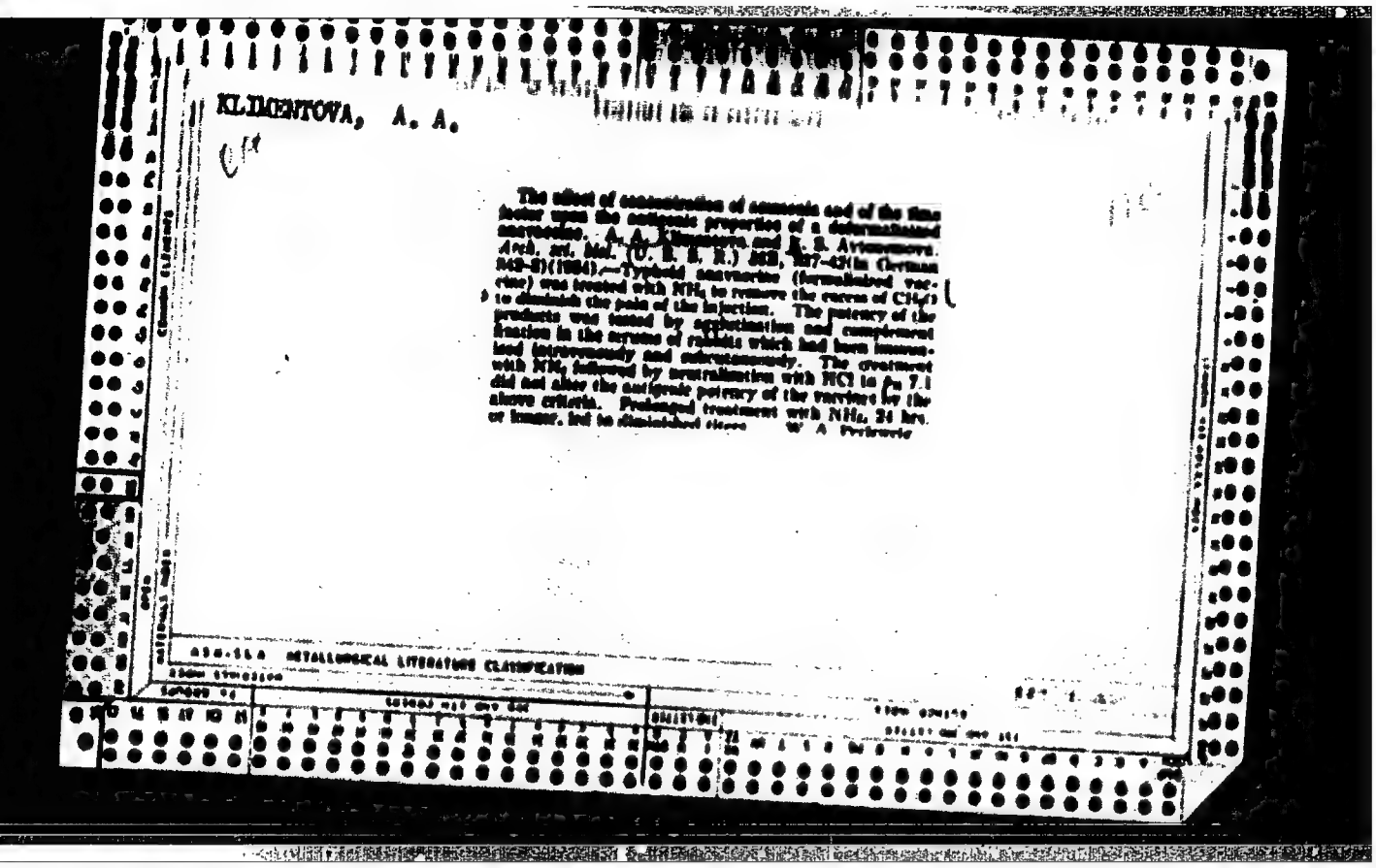
SUB CODE: 18/ SUBM DATE: 29Jul65/ ATD PRESS: 4195

TS

Card 3/3

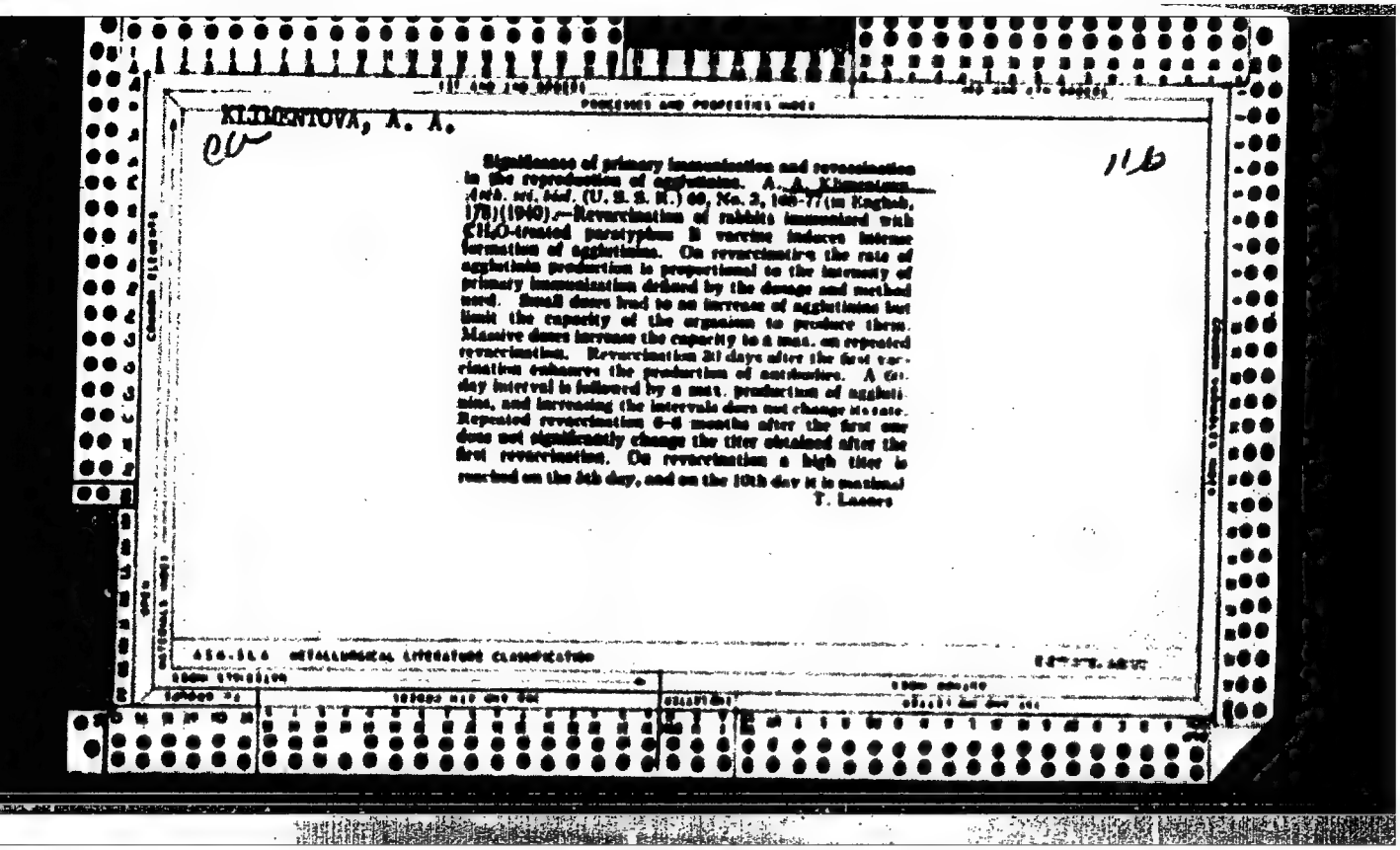
AKULINICHEV, I.T.; ANDREYEV, L.F.; BAYEVSKIY, R.M.; BAYKOV, A.Ye.; BUYLOV, G.G.
GAZENKO, O.G.; GRYUNTAL', R.G.; ZAZYKIN, K.P.; KLIMENKOV, Yu.P.;
MAKSIMOV, D.G.; MERKUSHKIN, Yu.G.; MONAKHOV, A.V.; PETROV, A.P.;
RYABCHENKOV, A.D.; SAZONOV, N.P.; UTYAMYSHEV, R.I.; FREYDEL', V.R.;
KHIL'KEVICH, B.G.; SHADRINTSEV, I.S.; SHEVANDINA, S.B.; ESAULOV,
N.G.; YAZDOVSKIY, V.I.

Method and means of medical and biological studies in a space flight. Probl. kosm. biol. 3:130-144 '64. (MIRA 17:6)



KLIMENTOVA, A. A.

The effect of concentration of ammonia and of the time factor upon the antigenic properties of a deformalinized anatoxine. A. A. Klimentova and A. S. Avtonomova. Arch. sci. Mal. (U. S. S. R.) 2(3), 327-42(in German 343-51)(1934).—Typhoid anatoxine (formalinized vaccine) was treated with NH_3 to remove the traces of CH_2O to diminish the pain of the injection. The potency of the products was tested by agglutination and complement fixation in the serums of rabbits which had been immunized intravenously and subcutaneously. The treatment with NH_3, followed by neutralization with HCl to P_H 7.1 did not alter the antigenic potency of the vaccines by the above criteria. Prolonged treatment with NH_3, 24 hrs. or longer, led to diminished titers. W. A. Perlzweig



KLIMENTOVA, A. A.

Significance of primary immunization and revaccination in the reproduction of agglutinins. A. A. Klimentova. *Arch. sci. biol.* (U. S. S. R.) 60, No. 2, 169-77 (in English, 178)(1940).—Revaccination of rabbits immunized with CH₂O-treated paratyphus B vaccine induces intense formation of agglutinins. On revaccination the rate of agglutinin production is proportional to the intensity of primary immunization defined by the dosage and method used. Small doses lead to an increase of agglutinins but limit the capacity of the organism to produce them. Massive doses increase the capacity to a max. on repeated revaccination. Revaccination 21 days after the first vaccination enhances the production of antibodies. A 60-day interval is followed by a max. production of agglutinins, and increasing the intervals does not change its rate. Repeated revaccination 6–8 months after the first one does not significantly change the titer obtained after the first revaccination. On revaccination a high titer is reached on the 5th day, and on the 10th day it is maximal.

T. Lasarev

KLIMENTOVA, A. A. and UCHITEL', I. Ya.

"Problemy Reaktivnosti Ucheniia Infektsii i Immyunitete (Problems of Reactivity in the Theory of Infection and Immunity), Medgiz, 1950, pp 197-198.

KLIMENTOVA, A.A.

Significance of conditioned reflexes in the formation of specific agglutinins. Zhur.mikrobiol.epid. i immun. no.8:80-84 Ag '55. (MLRA 8:11)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR (dir.--prof. G.V.Vygodchikov)

(REFLEX, CONDITIONED, eff. on agglutinin form.)

(AGGLUTINATION, specific agglutinin form., eff. of conditioned reflex)

KLI [illegible], A. A., [illegible]VA G, V.; YAROVLEVA, [illegible]. A.

"Immunogenesis and conditioned reflexes."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists, and Infectionists, 1959.

L 62623-65 EWT(l)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5011283 UR/0016/65/000/004/0096/0101

AUTHOR: Klimentova, A. A.; Fryazinova, I. B. 17

TITLE: Immunogenesis and cellular reactions of lymph nodes under conditions of vitamin C deficiency 16

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 4, 1965, 96-101

TOPIC TAGS: animal, guinea pig, immunology, vitamin C, vitamin deficiency, lymph node, antibody, antigen, complement fixation

ABSTRACT: The effect of a vitamin C deficiency on antibody formation in regional lymph nodes was investigated in guinea pigs in two experimental series using a corpuscular antigen and a soluble antigen. Control animals were maintained on a Lecoq diet and a 30 mg. daily dose of ascorbic acid. A vitamin C deficiency was induced in the experimental animals by a Lecoq diet with the daily dose of ascorbic acid reduced to 0.5 mg in the first series, and 0.3 mg in the second series. Animals of the first series were immunized with a corpuscular Rickettsia mooseri antigen and animals of the second

Card 1/3

L 62623-65
ACCESSION NR: AP5011283

series were immunized with a soluble diphtheria anatoxin to determine complement fixation reactions. Groups of animals were killed at periods of 1 to 25 days following immunization. Body weight changes, blood serum protein fraction levels, ascorbic acid levels of organs, antibody titer fluctuations of lymph nodes and blood, and cellular changes of lymph nodes served as indices. Results show that in the first series, complement fixing antibodies were found in the regional lymph nodes and blood by the 3d day and reached a peak by the 5th day. The antibody level of the blood was considerably higher than that of the regional lymph nodes, and remained high up to the 15th day. In the first series, the vitamin C deficiency tended to increase antibody formation slightly compared to control animals. In the second series, diphtheria antitoxin levels of the regional lymph nodes and blood were similar to those of control animals, but appeared a few days later and titers were slightly higher. On the basis of present findings, the immunological response of animals does not appear to be significantly affected by a vitamin C deficiency. Orig. art. has: 2 figures & 1 table.

Card 2/3

L 62623-65
ACCESSION NR: AP5011283

ASSOCIATION: Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR (Institute of Epidemiology and Microbiology AMN SSSR)

SUBMITTED: 06Mar64 ENCL: 00 SUB CODE: LS

NR REF SOV: 011 OTHER: 005

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Card 3/3

KLIMENTOVA, A.I.; FIZYAZINOVA, I.B.

Immunogenesis and cellular reaction of the lymphatic nodes in C-hypovitaminosis. Zhur.mikrobiol., epid. i immun. 42 no.4:96-101 Ap '65. (MIRA 18:5)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

KLIMENTOVA, A.S.; FEDOROVA, N.A.

Outbreak of dysentery of alimentary origin. Zhur.mikrobiol., epid. i immun. 42 no.9:143-144 S '65.
(MIRA 18:12)

1. Submitted March 28, 1964.

SITKOVSKIY, P.A.; KOMAROV, G.V.; BRUSENTSEV, V.F.; KREMENETSKIY, N.N.; MAMAYEV, M.G., kand.tekhn.nauk; SMIRNOV, A.V., kand.tekhn.nauk; AFANAS'YEV, I.V.; VOLOD'KO, I.F., kand.tekhn.nauk; KHOLYAROV, S.A.; KONDRAT'YEV, V.V.; KARLINSKAYA, M.I.; NIKOLAYEV, M.I., kand.tekhn. nauk; DOROKHOV, S.M.; PISHCHUROV, P.V.; KLIMENTOVA, A.V.; ROZENBLAT, Zh.I.; PANDEYEV, V.V., kand.tekhn.nauk; KULIKOV, P.Ye.; SHIMANOVICH, S.V.; DELITSIN, M.V., retsenzent; BRAUDE, I.D., retsenzent; BARYSHEV, A.M.; retsenzent; GRIGORYANTS, A.S., retsenzent; IGNATYUK, G.L., retsenzent; KALABUGIN, A.Ya., retsenzent; KREMENETSKIY, N.D., retsenzent; POPOV, K.V., retsenzent; ORLOVA, V.P., red.; LEVIEV, V.Ya., red.; SOKOLOVA, M.N., tekhn.red.; FEDOTOVA, A.F., tekhn.red.

[Handbook for hydraulic and agricultural engineers] Spravochnik gidrotekhnika melioratora. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 766 p. (MIRA 12:3)

(Hydraulic engineering) (Agricultural engineering)

SAVITSKIY, Leopol'd Mikhaylovich; FOKIN, D.P.; KLIMENTOVA, A.V.; OVCHINNIKOV, V.V.; VAYNSHTEYN, I.S.; ZAPIVAKHIN, A.I., red.; PROKOF'YEVA, L.N., tekhn.red.

[Economic effectiveness of land improvement] Ekonomicheskaia effektivnost' melioratsii zemel'. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1960. 143 p. (MIRA 13:10)
(Reclamation of land)

KLIMENTOVA, J.

ACTH in the treatment of hyperemesis. Cesk. gynek. 29 no.9: 691-694 N'64

1. Gyn.-por.odd. ZUNZ v Cottwaldove (vedoucí MUDr. J.Pekorny).

KLIMENTOVA, N. V., KOLESNIKOV, G. S. and DAVYDOVA, S. L. (USSR)

Polimery soderzhashchie germanii
Germanium containing polymers
IUPAC S I:156-9

report presented at the Intl. Symposium on Macromolecular Chemistry, Moscow, 14-18 June 60

KLIMENTOVA, M.

KLIMENTOVA, M.

Problems concerning the technique of preparing meals in collective eating places. p.326 (Vyziva Lidu. Praha. Vol. 9, no. 9, Sept. 1954)

SO: Monthly List of East European Accession (EEAI), LC, Vol. 4, No. 6, June 1955, Uncl.

KLIMENTOVA, M.

Reason for the insufficient thickening of some jams and marmalades. (Supplement)

P. 25 (Ministry of Health, Research Institute for Organization of Health Service) Vol. 12, No. 7/8, July/Aug. 1957.

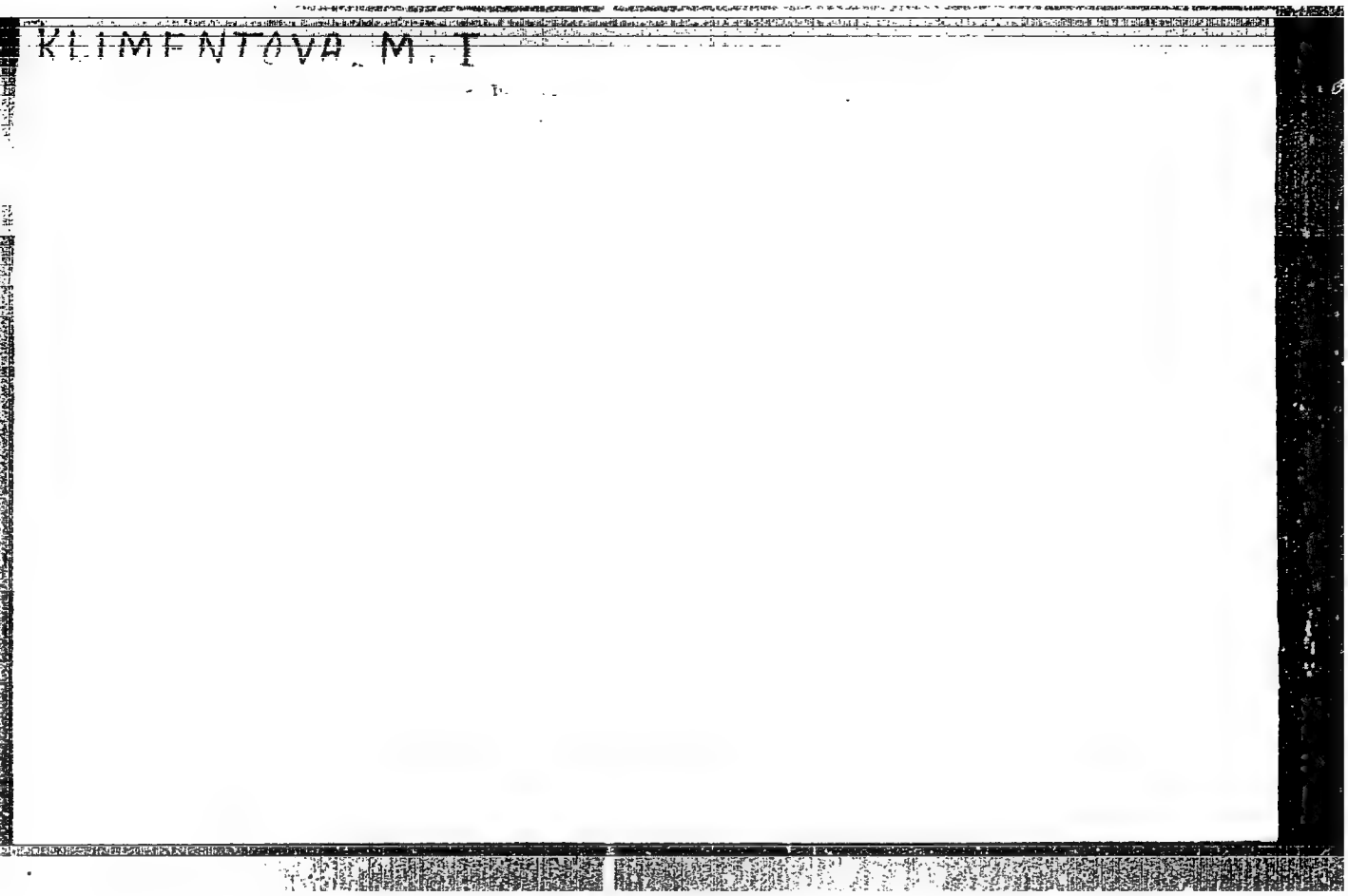
SO: Monthly Index of East European Acessions (AMEI) Vol. 6, No. 11 November 1957.

KLIMENTOVA, M.

Preserving vitamin C in ready-cooked meals. (Supplement)

p. 37 (VYZIVA LIDU) Vol. 12, no. 11, Nov. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958



KOLESNIKOV, G.S.; KLIMENTOVA, N.V.

Tributylboron as a catalyst for polymerization of unsaturated compounds. Izv. AN SSSR. Otd. khim. nauk no.5:652-653 My '57. (MIRA 10:8)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.
(Boron organic compounds) (Catalysts) (Polymerization)

Bu B is shown to be a very effective catalyst for the polymerization of Ph-CH: CH_2, CH_2: CHCN, and CH_2: CMeCO Me; the use of 2 % catalyst results in rapid polymerization of the monomers within a few hrs.; acrylonitrile, however, polymerizes but sluggishly.

AUTHORS: Kolesnikov, G. S., Fedorova, L. S., Tsetlin, B. L., Klimentova, N. V. SOV/62-58-7-15/26

TITLE: Carbon Chain Polymers and Copolymers (Karbotsepnyye polimery i sopolimery) Communication 5. The Synthesis and the Properties of the Copolymers of Acrylonitryl and Methyl Methacrylate (Soobshcheniye 5. Sintez i svoystva sopolimerov akrilonitrila i metilmetakrilata)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 7, pp 886 - 890 (USSR)

ABSTRACT: The present paper deals with the explanation of the influence of the correlation of the monomers (in the initial mixture) on the composition (structure) of the copolymer at a relatively high rate of reaction. The authors further deal with the investigation of the dependence of some properties of the copolymers on their structure. The authors produced acrylonitryle and methyl methacrylate copolymers by means of an emulsion at a high rate of reaction. Furthermore the structure of these copolymers was determined. It was found that minimum values of the characteristic viscosity of the copolymers on the one hand, and of the temperatures of the passage into highly elastic and more liquid

Card 1/2

Carbon Chain Polymers and Copolymers. Communication 5: SOV/62-58-7-15/26
The Synthesis and the Properties of the Copolymers of Acrylonitryl and Methyl Methacrylate

state on the other hand correspond to copolymers of different structure. It was also found that methyl methacrylate copolymers with acrylonitryle (up to 30 molar % of acrylonitryle) approach poly methyl methacrylate very closely as regards its stability. There are 3 figures, 2 tables, and 11 references, 2 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds, AS USSR)

SUBMITTED: December 30, 1956

Card 2/2

5(3)

AUTHORS: Kolesnikov, G.S., Klimentova, N.V. SOV/62-58-11-18/26

TITLE: Carbon Chain Polymers and Copolymers (Karbotsepnyye polimery i sopolimery)
Communication 5. Copolymerization of Acrylonitrile and Methyl Methacrylate in the Presence of Tributyl Boron (Soobshcheniye 5. Sopolimerizatsiya akrilonitrila i metilmetakrilata v prisutstvii tributilbora)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1383 - 1387 (USSR)

ABSTRACT: By provisional experiments the authors have ascertained that methyl methacrylate is polymerized by activated borofluoride etherate if its solution in toluene with tributyl boron is heated. At the same time the polymerization of methyl methacrylate also takes place, if the activator is not present, but in the presence of tributyl boron. The first series of experiments was carried out for the purpose of ascertaining the influence of the concentration of catalyst and activator on the composition, yield and properties of the copolymer. Results are given (Table 1). It has been ascertained that for the production of a copolymer of maximum molecular weight a concentration of the catalyst of the

Card 1/3

order of 2 - 3 molecular % of the sum of monomers must be used. It can be seen (Table 2) that the concentration of the activator has practically no influence on the composition of the polymer and on the yield. In order to explain the influence of temperature on the process of copolymerization a further series of experiments has been carried out (Table 3). It can be seen that the yield of copolymers remains practically constant at temperatures of 30° and above. At 30-40° the characteristic viscosity reaches its maximum. In the following series of experiments (Table 4) the influence of the time of reaction on the copolymerization was investigated. It can be gathered from this table that a prolongation of the time of reaction from 0,5 to 2 hours results in a noticeable increase of the yield. A longer time of reaction exerts smaller influence. The characteristic viscosity increases, if the time of reaction is extended up to 3 hours. It has been tried to ascertain the influence of the relations of monomers on the copolymerization. For this purpose a further series of experiments was carried out, the results of which are given (Table 5). It was ascertained that the content of acrylonitrile in the copolymer

Carbon Chain Polymers and Copolymers. Communication 5. SOV/62-58-11-18/26
Copolymerization of Acrylonitrile and Methyl Methacrylate
in the Presence of Tributyl Boron

in all cases was smaller than in the initial mixture of monomers. The summary concentration of monomers in the reaction mixture is not unimportant for the copolymerization process. An intensified concentration of monomers leads to an increase in the yield of copolymers and to an increase of the characteristic viscosity, if all other conditions remain the same. There are 5 tables and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elementalorganic Compounds of the Academy of Sciences, USSR)

SUBMITTED: March 21, 1957

Card 3/3

KOLESNIKOV, G.S.; KLIMENTOVA, N.V.

Carbon chain polymers and copolymers. Part 10: Block polymerization of methylmethacrylate in the presence of tributylborine. Vysokom. soed. 1 no.3:362-366 Mr '59. (MIRA 12:10)

1.Institut elementoorganicheskikh soyedineniy AN SSSR.
(Polymerization) (Methacrylic acid) (Borine)

5(3)

AUTHORS: Kolesnikov, G. S., Klimentova, N. V., Yermolayeva, T. I. SOV/62-59-4-26/42

TITLE: Carbon Chain Polymers and Copolymers (Karbotsepnyye polimery i sopolimery). Communication 6. Polymerization of Styrene and Methylmethacrylate in Solution in the Presence of Tributyl Boron (Soobshcheniye 6. Polimerizatsiya stirola i metilmetakrilata v rastvore v prisutstvii tributilbora)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 727-730 (USSR)

ABSTRACT: In the present work methylmethacrylate and styrene were polymerized in the presence of variously concentrated tributyl boron whereas the other conditions remained unchanged. The results of the polymerization of methylmethacrylate are shown in table 1, those of the polymerization of styrene in table 2. Hence it can be seen that under the reaction conditions assumed and with a concentration of the catalyst less than 2 mol% the yield of the polymer is considerably reduced. The influence of the temperature on the polymerization process was investigated in two consecutive experimental series. The results are shown in tables 3 and 4. Hence it appears that

Card 1/3

the polymer yield rises with temperature in both cases. As a rule, the specific viscosity of the polymer solution is not influenced by temperature changes. The influence of the duration of polymerization on the yield and molecular weight of the polymers was investigated in two further experimental series. The results are shown in tables 5 and 6. It was found that the polymethylmethacrylate yield increases in the course of three hours and then remains constant. With styrene the yield remains constant already after one hour. The concentration of the solvent influences the molecular weight of the polymer in so far as the solvents usually are the carriers of the chain. The effect of the concentration of the solvent on the polymerization was investigated in two further experimental series (Tables 7 and 8). It was found that a stronger concentration on the monomers in the solvent causes a considerable increase of the methylmethacrylate yield and in both cases causes an increase of the molecular weight. There are 8 tables and 3 Soviet references.

Carbon Chain Polymers and Copolymers. SOV/62-59-4-26/42
Communication 8. Polymerization of Styrene and Methylmethacrylate in Solution in the Presence of Tributyl Boron

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: July 10, 1957

Card 3/3

5(3)

AUTHORS: Kolesnikov, G. S., Fedorova, L. S., Tsetlin, B. L., Klimentova, N. V.

SOV/62-59-4-27/42

TITLE: Carbon Chain Polymers and Copolymers (Karbotsepnyye polimery i sopolimery). Communication 9. Synthesis and Properties of Copolymers of Vinylidene Chloride With Acrylonitrile and Methylmethacrylate (Soobshcheniye 9. Sintez i svoystva sopolimerov khloristogo vinilidena s akrilonitrilom i metilmetakrilatom)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 731-735 (USSR)

ABSTRACT: In the present work an attempt was made of finding out the effect of the composition of copolymers of vinylidene chloride with acrylonitrile and methylmethacrylate on their transition temperatures in various physical states and on their solubility in organic solvents. In the synthesis of the copolymers and in the investigation of their properties the same methods were used as in the investigation of the copolymers of acrylonitrile with methylmethacrylate (Ref 16). The results obtained in the investigation of the composition and properties of the copolymers of the system vinylidenechloride-acrylonitrile

are shown in table 1. The conditions were similar in all cases. The only change was in the ratio of the monomers in the initial solution. The values of the vitrification temperature (T_{gt}) and the flowing temperature (T_t) of the copolymers were determined from the thermomechanical compression curves (Fig 1). Table 1 shows that a higher vinylidene chloride-monomer content in the initial solution reduces the yield of the copolymer. Of all copolymers obtained only that with 44.1 mol% vinylidene chloride content is soluble in acetone. This copolymer has the least viscosity and the lowest T_{gt}. Upon transition from the homopolymer of vinylidene chloride to copolymers with already smaller quantities of acrylonitrile the thermomechanic curves assume the form which is characteristic of normal thermomechanic curves of linear amorphous polymers. The values T_{gt} and T_t decrease rapidly. Table 2 shows the investigation results of the system vinylidene chloride-methylmethacrylate. Figure 2 shows the thermomechanic curves for the samples of

this system. All copolymers are easily soluble in dichloroethane. Copolymers with a content of 20 mol% vinylidene chloride are soluble in acetone. With a higher vinylidene chloride content they become insoluble in acetone. Copolymers with a high vinylidene chloride content have a low T_{st} and T_t just as in the system vinylidene chloride-acrylonitrile. Numerous copolymers of this system have a comparatively low T_t and sufficiently high T_{st}. For this reason it might be possible to manufacture these copolymers by means of casting methods. There are 2 figures, 2 tables, and 30 references, 1 of which is Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: July 18, 1957
Card 3/3

KLIMENTOVIĆ, N.V.

84515

S/190/60/002/004/016/020
B004/B056

15.8114 2109,2209,1581

AUTHORS: Kolesnikov, G. S., Davydova, S. L., Klimentova, N. V.

TITLE: Carbochain Polymers and Copolymers. XXII. Synthesis, Polymerization, and Copolymerization of Methacrylyltriethyl Germanium

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 4, pp. 563-566

TEXT: It was the aim of the authors to synthetize methacryl derivatives of germanium and to produce their polymers. In the present paper, a report is given on the results obtained by the hitherto unknown methacrylyltriethyl germanium (MATEG). This compound was synthetized according to the scheme $(C_2H_5)_3GeBr + CH_2=C(CH_3)COOK \xrightarrow{CH_3OH} CH_2=C(CH_3)COOGe(C_2H_5)_3$. The infrared spectrum of this compound and, for comparison, the infrared spectrum of methylmethacrylate are

Card 1/2

Carbochain Polymers and Copolymers. XXII. Synthesis, Polymerization, and Copolymerization of Methacrylyltriethyl Germanium

shown in Fig. 1. In the presence of benzoylperoxide or azoisobutyric acid dinitrile MATEG polymerized to form transparent products. Further, also copolymerization with methylmethacrylate and styrene was attained. Because of the low activity of MATEG, the copolymers contained considerably less MATEG than the initial mixture with methylmethacrylate (1 : 194; 1 : 239 instead of 1 : 4; 1 : 10; see Table). The thermal properties of the polymer and its copolymers are represented in Fig. 2. The polymer of MATEG softens at 180 - 185°C, its copolymer with methylmethacrylate at a lower temperature, and the copolymer with styrene at about 145°C. The authors thank G. L. Slonimskiy for the thermomechanical examination, N. A. Chumayevskiy for the infrared spectra. There are 2 figures, 1 table, and 5 references: 2 Soviet, 1 US, 1 British, and 1 German.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental-organic Compounds AS USSR)

SUBMITTED: January 15, 1960

Card 2/2

38893

S/190/62/004/007/009/009
B119/B180

158070

AUTHORS: Kolesnikov, G. S., Davydova, S. L., Klimentova, N. V.

TITLE: Carbochain polymers and copolymers. XL. Polymerization and copolymerization of methacrylic and acrylic derivatives containing germanium

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 7, 1962, 1098-1102

TEXT: Copolymerizing methacrylyl triethyl germanium with styrene at 60°C the authors found the relative activities of the two components to be 0.93 ± 0.08 and 1.05 ± 0.02 respectively. The following new compounds were synthesized: $CH_2=C(CH_3)COOGe(C_4H_9)_3$ (1) (b.p. 130-132°C at 4 mm Hg; d_{20}^{20} 1.0166; n_D 1.4602 at 20°C); $CH_2=C(CH_3)COOGe(C_6H_5)_3$ (2) (m.p. 180°C); $CH_2=C(CH_3)COOGe\equiv(C_6H_{11})_3$ (3) (m.p. 82-84°C); $CH_2=CHCOOGe(C_2H_5)_3$ (4) (b.p. 88-90°C at 12 mm Hg; d_{20}^{20} 1.1530; n_D 1.4582 at 20°C); $CH_2=CHCOOGe(C_4H_9)_3$ (5) (b.p. 131°C at 4 mm Hg;

Card 1/2

d_{20}^{20} 1.0131; n_D 1.4609 at 22°C); $CH_2=CHCOOGe(C_6H_5)_3$ (6) (m.p. 178-178.5°C). Compounds 1, 3, 4, and 5 were polymerized separately (initiator: azoisobutyric acid dinitrile), and compounds 1, 4, and 5 were copolymerized (20 mole% each in the reaction mixture) with styrene or methyl methacrylate. Polymer yields were 40-60%, and copolymers 52-60%. [η] of the polymers lies between 0.30 and 1.20 (solvent: pyridine, dimethyl formamide), that of the copolymers between 0.35 and 1.45 (solvent: dimethyl formamide). Maximum Ge content in the copolymers is 7.58% (in the case of 5, with methyl methacrylate). 1 polymerizes in emulsion in the presence of potassium persulfate. The thermomechanical properties of some of the polymers were determined. There are 1 figure and 4 tables. The most important English-language reference is: F. R. Mayo, F. M. Lewis, J. Amer. Chem. Soc., 66, 1594, 1944.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: May 5, 1961

Card 2/2

KOLESNIKOV, G.S.; DAVYDOVA, S.L.; YAMPOL'SKAYA, M.A.; KLIMENTOVA, N.V.

Interaction of mono- and dicarboxylic acids with trialkyl derivatives of boron and aluminum. Izv. AN SSSR. Otd.khim.nauk no.5:841-844 My '62. (MIRA 15:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Boron organic compounds) (Aluminum organic compounds)
(Acids, Organic)

KOLESNIKOV, G.S.; DAVYDOVA, S.L.; KLIMENTOVA, N.V.

Carbochain polymers and copolymers. Part 40: Polymerization and copolymerization of methacrylic and acrylic derivatives containing germanium. Vysokom.soed. 4 no.7:1098-1102 Jl '62. (MIRA 15:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Germanium organic compounds)
(Methacrylic acid) (Acrylic acid)

L 41147-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/GS/RM 35 33

ACCESSION NR: AT5002118 S/0000/64/000/000/0113/0117 B+1

AUTHOR: Kolesnikov, G. S.; Davydova, S. L.; Klimentova, N. V.

TITLE: Synthesis of methacrylates and acrylates containing elements of groups III and IV of the periodic table

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i issledovaniye svoystv monomerov (Synthesis and properties of monomers). Moscow, Izd-vo Nauka, 1964, 113-117

TOPIC TAGS: methacrylate, acrylate, boron methacrylate, aluminum methacrylate, silicon acrylate, tin methacrylate, boron acrylate, silicon methacrylate, germanium methacrylate, germanium acrylate, [illegible] silicon. 7

ABSTRACT: Methacrylates and acrylates of trialkyl [illegible] were synthesized [illegible] aluminum and unsaturated [illegible] presence of [illegible] in organic solvents (except [illegible] and copolymerization of dibutyl [illegible] solvents [illegible] solid polymers and [illegible] mer- [illegible]methylformamide). Meth[illegible]

Card 1/2

L 41147-65
ACCESSION NR: AT5002118

[illegible] with methylmethacrylate and styrene in accordance with the radical mechanism [illegible] form- [illegible]ent, colorless, glassy polymers and copolymers [illegible] beads and [illegible]

ASSOCIATION: None

SUBMITTED: 30Jul64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 013 OTHER: 011

Card 2/2

KLIMENTOVA, K.V.; KORSHAK, V.V.; SUPRUN, A.P.

Polymerization and copolymerization of 3,3-dichloro-1-propene. Izv. AN SSSR. Ser. khim. no.7:1264-1266 '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KLIMENTOVA, T.A., bibliograf

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1. Respublikanskaya nauchno-tekhnicheskaya biblioteka Gosudarstvennogo komiteta nauchno-issledovatel'skikh rabot Soveta Ministrov Azerbaydzhanskoy SSR, Baku.